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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,005	02/17/2004	Frank M. Simonutti	WG0057H	9568

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EXAMINER

HUNTER, ALVIN A

ART UNIT	PAPER NUMBER
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3711

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/780,005	SIMONUTTI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alvin A. Hunter	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18-39 and 41-56 is/are rejected.
- 7) ☒ Claim(s) 17 and 40 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>02/17/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Subject matter of claims 17 and 40, in particular a specific gravity of 1.230 to 1.270, are not disclose within the specification.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14, 17, 34, 38, 40, 42, 44, 46, 51, and 53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claims 14, 17, 38, and 40, the limitation all components make the claim unclear and is, therefore, rejected. Claim 1 requires at least three layers; therefore, recitation of "all components" within claims 14 and 17 can be an infinite number of layers.

Claims 34, 51, and 53 recite the limitation "the at least one intermediate layer" in lines 1 and 2. There is insufficient antecedent basis for this limitation in these claims.

Claims 42, 44, and 46 recite the limitation "the inorganic materials" in line 1. There is insufficient antecedent basis for this limitation in these claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 10, 13, 15, 18-25, 27, 28, 31, 35, 37, and 39-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan et al. (USPN 5779561).

In regards to claim 1, Sullivan et al. discloses a golf ball comprising a solid center 10 having a deflection, under an applied static load of 200 lb., of between about 0.100 inches and about 0.140 inches, equivalent to a PGA compression of 60 to 100; at least one intermediate layer 14 comprised of thermoplastic material; and a cover layer 16 comprising an ionomer or ionomer blend and having a Shore D hardness, measured on the curved surface of the golf ball, of greater than about 60 (See Summary of the invention, Column 7, lines 21 through 23; Paragraph bridging columns 10 and 11; and paragraph bridging columns 13 and 14 and Figure 1). It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet- per-second is inherently met by Sullivan et al.

In regards to claim 2, Sullivan et al. discloses the golf ball having a coefficient of restitution of at least 0.750 (See Summary of the invention). It is submitted that the test velocity is inherently met because the structure of the claim 1 is met by Sullivan et al.

In regards to claims 3 and 4, Sullivan et al. discloses the center having a diameter of 1.0 to 1.6 inches (See Column 7, lines 21 through 23).

In regards to claim 5, Sullivan et al. discloses the at least one intermediate layers having a Shore D hardness as measured on the curved outer surface of the at least one intermediate layer of less than 65.

In regards to claim 10, 13, and 15, Sullivan et al. discloses the ball has a diameter of about 1.680 in., which is about 1.650 and 1.620 inches (See Column 7, lines 5 and 6).

In regards to claim 21, Sullivan et al. discloses the at least one intermediate layer being adjusted to a desired specific gravity through use of an inert filler (See Columns 8 through 10).

In regards to claim 22, Sullivan et al. discloses the inert filler being chosen from the groups consisting of organic and inorganic materials (See Columns 8 through 10).

In regards to claim 23, Sullivan et al. discloses the inorganic materials being chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof.

In regards to claim 24, Sullivan et al. discloses the cover layer being adjusted to a desired specific gravity through use of an inert filler (See Column 8, lines 26 through 33 and Columns 9 and 10).

In regards to claim 25, Sullivan et al. discloses the inert filler being chosen from the groups consisting of organic and inorganic materials (See Column 8, lines 26 through 33 and Columns 9 and 10).

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In regards to claim 27, it is submitted that Sullivan et al. inherently meets the limitation of claim 27, being that the structure has been met within claim 1.

In regards to claim 28, Sullivan et al. discloses a golf ball comprising a solid center 10 of polybutadiene, a mantle layer 14 comprised of thermoplastic material; and a cover layer 16 comprising an ionomer wherein the golf ball has a coefficient of restitution of at least 0.750 (See Summary of the invention, Column 7, lines 21 through 23; Column 7, lines 28 through 47; Paragraph bridging columns 10 and 11; and paragraph bridging columns 13 and 14 and Figure 1). It is submitted that the COR at the claim club speed is inherently met because the structure of the claim 1 is met by Sullivan et al.

In regards to claim 29, It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet-per-second is inherently met by Sullivan et al.

In regards to claim 31, Sullivan et al. discloses the center having a diameter of 1.0 to 1.6 inches (See Column 7, lines 21 through 23).

In regards to claim 35, it is submitted that Sullivan et al. inherently meets the limitation of claim 35, being that the structure has been met within claim 1.

In regards to 36, 37, and 39, Sullivan et al. discloses the ball has a diameter of about 1.680 in., which is about 1.650 and 1.620 inches (See Column 7, lines 5 and 6).

In regards to claim 41, Sullivan et al. discloses the core being adjusted to a desired specific gravity through use of an inert filler (See Column 7, lines 28 through 47).

In regards to claim 42, Sullivan et al. discloses the inorganic materials are chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof (See Column 7, lines 28 through 47).

In regards to claim 43, Sullivan et al. discloses the at least one intermediate layer being adjusted to a desired specific gravity through use of an inert filler (See Columns 8 through 10).

In regards to claim 44, Sullivan et al. discloses the inorganic materials being chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof (See Columns 8 through 10).

In regards to claim 45, Sullivan et al. discloses the cover layer being adjusted to a desired specific gravity through use of an inert filler (See Column 8, lines 26 through 33 and Columns 9 and 10).

4. Claims 28-30, 32, 35-37, 39, 41-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan et al. (USPN 5984806).

In regards to claim 28, Sullivan et al. discloses a golf ball comprising: a core comprising a polybutadiene; a mantle comprising a thermoplastic material; and a cover layer comprising an ionomer; wherein the golf ball exhibits a coefficient of restitution of 0.701 to 0.825 (See Column 10, lines 37 through 50, Column 28, lines 40 through 56; Column 34, lines 11 through 59). It is submitted that the COR at the claim

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club speed is inherently met because the structure of the claim 1 is met by Sullivan et al.

In regards to claim 29, It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet-per-second is inherently meet by Sullivan et al.

In regards to claim 30, Sullivan et al. discloses the polybutadiene comprising a high cis-1,4 content polybutadiene and the core further comprising about 15 to about 25 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, about 2 to about 50 parts by weight of a metal oxide activator, and about 0.1 to about 10 parts per hundred resin of a free radical initiator (See Column 29 and 30).

In regards to claim 32, Sullivan et al. discloses the thermoplastic material comprising about 80% ethylene, 8-10.5% acrylic acid and about 12 to 20% n-butyl acrylate, being that low acid ionomers inherently have an acid content of less than 16% and can be combined with a comonomer (See Column 17, lines 30 through 45).

In regards to claim 35, it is submitted that Sullivan et al. inherently meets the limitation of claim 35, being that the structure has been meet within claim 1.

In regards to 36, 37, and 39, Sullivan et al. discloses the ball has a diameter of about 1.680 in., which is about 1.650 and 1.620 inches (See Column 34, lines 11 through 59).



In regards to claim 41, Sullivan et al. discloses the core adjusted to a desired specific gravity through use of an inert filler (See Column 30, lines 43 through 49).

In regards to claim 42, Sullivan et al. discloses the inorganic materials are chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof (See Column 30, lines 43 through 49).

In regards to claim 43, Sullivan et al. discloses the at least one intermediate layer being adjusted to a desired specific gravity through use of an inert filler (See Columns 24 through 26).

In regards to claim 44, Sullivan et al. discloses the inorganic materials being chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof (See Columns 24 through 26).

In regards to claim 45, Sullivan et al. discloses the cover layer being adjusted to a desired specific gravity through use of an inert filler (See Columns 24 through 26).

In regards to claim 46, Sullivan et al. discloses the inorganic materials being chosen from the groups consisting of metals, metal oxides, metal sulfates, and combinations thereof (See Columns 24 through 26).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-9, 30, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Sullivan et al. (USPN 5984806).

In regards to claim 6, Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). One having ordinary skill in the art would have found it obvious to incorporate an copolymer of ethylene and acrylic acid, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in order to increase the durability of the golf ball.

In regards to claim 7, Sullivan et al. '806 discloses the composition containing greater than 5 parts per hundred of a fatty acid salt chosen from the group consisting of magnesium stearate (See Columns 24 through 25).

In regards to claim 8, Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). It is further noted that the composition may contain a monomer of an acrylic ester class, wherein Sullivan et al. recognizes that butyl acrylate is within the acrylate ester class (See Column 17, lines 30 through 41 and Column 21, lines 24 through 40). One having ordinary skill in the art would have found it obvious to

incorporate an copolymer of ethylene and acrylic acid and n-butyl acrylate, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in order to increase the durability of the golf ball.

In regards to claim 9, Sullivan et al. '806 discloses the composition containing greater than 5 parts per hundred of a fatty acid salt chosen from the group consisting of magnesium stearate (See Columns 24 through 25).

In regards to claim 30, Sullivan et al. '516 does not disclose the specific make up of the core. Sullivan et al. discloses the polybutadiene comprising a high cis-1,4 content polybutadiene and the core further comprising about 15 to about 25 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, about 2 to about 50 parts by weight of a metal oxide activator, and about 0.1 to about 10 parts per hundred resin of a free radical initiator (See Column 29 and 30).

In regards to claim 32, Sullivan et al. '561 discloses the use of thermoplastic resin, in particular an ionomer resin, within the mantle layer but does not disclose the type of ionomer. Sullivan et al. '806 discloses the thermoplastic material comprising about 80% ethylene, 8-10.5% acrylic acid and about 12 to 20% n-butyl acrylate, being that low acid ionomers inherently have an acid content of less than 16% and can be combined with a comonomer (See Column 17, lines 30 through 45). One having ordinary skill in the art would have found it obvious to incorporate the above, as taught by Sullivan et al. '806, into that of Sullivan et al. '516 in order to increase the durability of the golf ball. Furthermore, the make of the Sullivan et al. '806's core contains the typical amount used to produce a conventional core; therefore, one having ordinary skill

in the art would have found it obvious to incorporate the above core of Sullivan et al. '806 into that of Sullivan et al. '516, because it is conventional and easily accessible within the art.

6. Claims 11, 12, 14, 16, 33, 34, 38, 47-51, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Yamagishi et al. (USPN 5779563).

In regards to claim 11, 16, and 33, Sullivan et al. does not disclose the core, intermediate layer, and cover layer having approximately the same specific gravity. Yamagishi et al. discloses a golf ball having a core 1, intermediate layer 2 and cover 3 having approximately the same specific gravity (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33). On having ordinary skill in the art would have found it obvious to have the core, intermediate layer, and cover layer having approximately the same specific gravity, as taught by Yamagishi et al., in order to improve the golf ball's distance, controllability, roll and straight travel.

In regards to claim 12, 14, 34, and 38, Yamagishi et al. discloses the specific gravity between the core, intermediate layer, and cover being 1.02 to 1.18, 1.10-1.25, and 0.9 to 1.2, wherein the cover is greater than the core by at least 0.01 (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33).

In regards to claim 47, Sullivan et al. discloses a golf ball comprising: a core comprising a polybutadiene; a mantle comprising a thermoplastic material; and a cover layer comprising an ionomer; wherein the golf ball exhibits a coefficient of restitution of

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0.701 to 0.825 (See Column 10, lines 37 through 50, Column 28, lines 40 through 56; Column 34, lines 11 through 59). It is submitted that the being that the structure the golf ball has been met, being struck by a driver club at a clubhead velocity of about 160 feet-per-second and an initial velocity off the clubhead of greater than about 240 feet-per-second is inherently met by Sullivan et al. Sullivan et al. does not disclose the core, intermediate layer, and cover layer having approximately the same specific gravity. Yamagishi et al. discloses a golf ball having a core 1, intermediate layer 2 and cover 3 having approximately the same specific gravity (See Column 2, lines 64 and 65; Paragraph bridging Columns 3 and 4; and Column 4 lines 28 through 33). On having ordinary skill in the art would have found it obvious to have the core, intermediate layer, and cover layer having approximately the same specific gravity, as taught by Yamagishi et al., in order to improve the golf ball's distance, controllability, roll and straight travel.

In regards to claim 48, Sullivan et al. discloses the golf ball exhibiting a coefficient of restitution of 0.701 to 0.825 (See Column 10, lines 37 through 50, Column 28, lines 40 through 56; Column 34, lines 11 through 59). It is submitted that the COR at the claim club speed is inherently met because the structure of the claim 1 is met by Sullivan et al.

In regards to claim 49 and 50, Sullivan et al. discloses the center having a diameter of 1.0 to 1.6 inches (See Column 7, lines 21 through 23).

In regards to claim 51, Sullivan et al. discloses the at least one intermediate layers having a Shore D hardness as measured on the curved outer surface of the at least one intermediate layer of less than 65 (See Figure 1).

In regards to claim 56, it is submitted that Sullivan et al. inherently meets the limitation of applicant's claim 56, being that the structure has been met within claim 47.

7. Claims 52, 53, 54, and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 5779561) in view of Yamagishi et al. (USPN 5779563).

In regards to claim 52, Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but Sullivan et al. '561 in view of Yamagishi et al. does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). One having ordinary skill in the art would have found it obvious to incorporate a copolymer of ethylene and acrylic acid, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in view of Yamagishi et al. in order to increase the durability of the golf ball.

In regards to claim 53, Sullivan et al. '806 discloses the composition containing greater than 5 parts per hundred of a fatty acid salt chosen from the group consisting of magnesium stearate (See Columns 24 through 25).

In regards to claim 54, Sullivan et al. '561 notes that the intermediate layer may contain an ionomer, but Sullivan et al. '561 in view of Yamagishi et al. does not disclose the type of ionomer. Sullivan et al. '806 discloses a golf ball comprising an ionomer made of a copolymer of ethylene and acrylic acid wherein the ionomer is totally neutralized with metal ions (See Column 18, lines 28 through 42). It is further noted that

the composition may contain a monomer of an acrylic ester class, wherein Sullivan et al. recognizes that butyl acrylate is within the acrylate ester class (See Column 17, lines 30 through 41 and Column 21, lines 24 through 40). One having ordinary skill in the art would have found it obvious to incorporate a copolymer of ethylene and acrylic acid and n-butyl acrylate, wherein about 100% of the acid is neutralized with metal ions, as taught by Sullivan et al. '806, into that of Sullivan et al. '561 in view of Yamagishi et al. in order to increase the durability of the golf ball.

In regards to claim 55, Sullivan et al. '806 discloses the composition containing greater than 5 parts per hundred of a fatty acid salt chosen from the group consisting of magnesium stearate (See Columns 24 through 25).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is 703-306-5693. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 703-308-1513. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAH

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